Self Assessment and the CMMI-AM – A Guide for Government Program Managers

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Acquisition Support Program

Since its initial release, this report has been revised to reflect information contained in the CMMI-AM, Version 1.1. This revision was released on August 1, 2005.

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Use of capability maturity models has become commonplace among software development organizations, especially defense contractors. Government program offices, however, have lagged behind contractors in implementing their own process improvement programs. The difference in relative maturity between program offices and contractors sometimes makes it difficult for program offices to gauge the state of their programs. In 2004, the Office of the Secretary of Defense announced the creation of the CMMI? Acquisition Module (CMMI-AM), Version 1.0. The module aids program offices in developing a level of parity with their suppliers in terms of process maturity. Version 1.1, released in 2005, is an incremental refinement. The first step in any process improvement endeavor is to determine the baseline state. A program office can undergo an external appraisal, but that is not a cost-effective solution for an organization that is still a novice in process improvement. For organizations with little process improvement experience, a better choice is to begin with a self-assessment. This guide provides program managers with general information about the CMMI-AM, details about the self-assessment technique, and the questions used in a self-assessment. After reading this guide, program managers can evaluate whether a self-assessment fits their needs, and if so, conduct one.

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To the Reader

Since its initial release, this report has been revised to consider the recently released version of the Capability Maturity Model® Integration (CMMI®) Acquisition Module (CMMI-AM), Version 1.1. Changes made to this report include

- Section 1.2 includes a brief discussion of CMMI-AM, Version 1.1.

- Figure 2 shows the evolution to CMMI-AM, Version 1.1.

- Figure 4 reflects Process Area changes in CMMI-AM, Version 1.1.

- The questions in Appendix B reflect changes in the Process Areas of CMMI-AM, Version 1.1.

- The reference list now includes a reference to CMMI-AM, Version 1.1.

- The acronym list includes acronyms that appear in the revised version of this report.

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Abstract

Use of capability maturity models has become commonplace among software development organizations, especially defense contractors. Government program offices, however, have lagged behind contractors in implementing their own process improvement programs. The difference in relative maturity between program offices and contractors sometimes makes it difficult for program offices to gauge the state of their programs. In 2004, the Office of the Secretary of Defense announced the creation of the CMMI® Acquisition Module (CMMI-AM), Version 1.0. The module aids program offices in developing a level of parity with their suppliers in terms of process maturity. Version 1.1, released in 2005, is an incremental refinement.

The first step in any process improvement endeavor is to determine the baseline state. A program office can undergo an external appraisal, but that is not a cost-effective solution for an organization that is still a novice in process improvement. For organizations with little process improvement experience, a better choice is to begin with a self-assessment.

This guide provides program managers with general information about the CMMI-AM, details about the self-assessment technique, and the questions used in a self-assessment. After reading this guide, program managers can evaluate whether a self-assessment fits their needs, and if so, conduct one.

1 The CMMI Acquisition Module

1.1   A Brief History

Use of capability maturity models has become commonplace in the software industry, especially among defense contractors. Beginning with the Capability Maturity Model® for Software (SW-CMM), and now continuing with the Capability Maturity Model Integration (CMMI®) framework, software development organizations have achieved significant gains in their ability to develop and deliver systems with predictable results [Goldenson 03]. Even a few government program offices have implemented process improvement programs with good results [Capell 04, Kotchman 02].[1] However, most have lagged behind their contractors in the area of process maturity. The difference in relative maturity frequently makes it difficult for program offices to accurately gauge the state of their programs and communicate with their contractors, ultimately leading to unpredictable results for those programs [Gallagher 04]. Figure 1 depicts the acquirer/supplier mismatch. Situations where both acquirers and suppliers possess high degrees of technical and management skill tend to yield the best results, whereas other combinations tend to increase the risk of failure.

The government increasingly relies on prime contractors, lead integrators, and the like, to operate with limited supervision. Such trust in these parties is not always warranted. It is incumbent upon the government to maintain some level of "smart buyer" capability in order to provide effective program management, oversight, and stewardship of taxpayer funds.

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[1]   Additional information about specific, quantitative results of process improvement based on CMMI models can be found at http://www.sei.cmu.edu/cmmi/results.html.
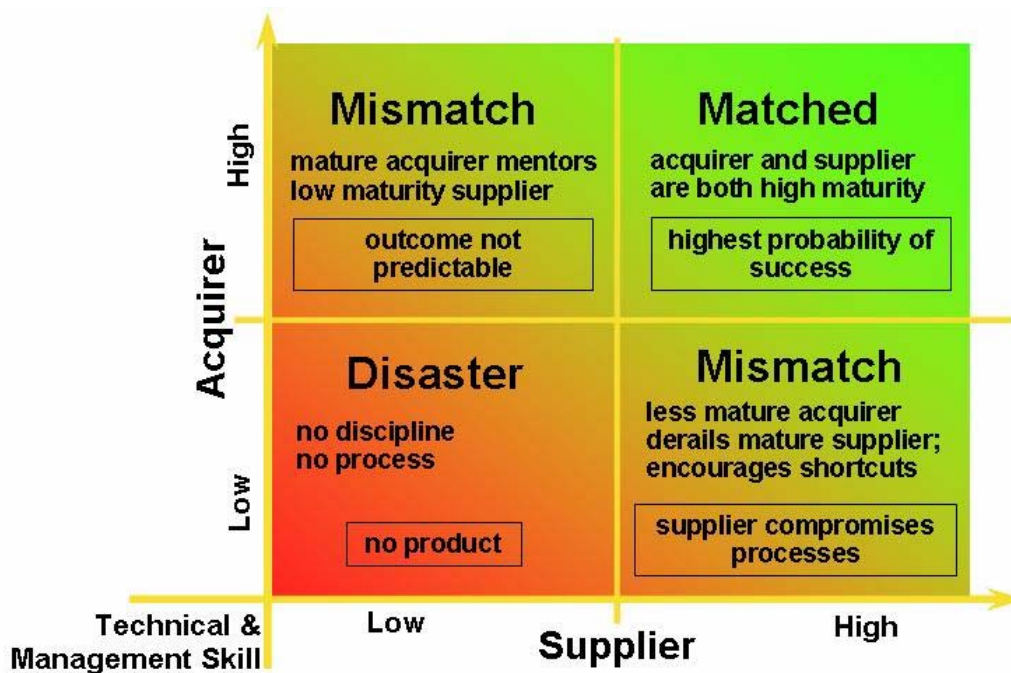
Figure 1:   The Acquirer/Supplier Mismatch

In 2002, Congressional leaders recognized the need for the defense department to improve its ability to manage programs, especially those with significant software content. They included Section 804 in the National Defense Authorization Act for Fiscal Year 2003, which requires each of the Services and Defense Agencies to establish software acquisition improvement programs [PL 02]. Specifically, Section 804 states:

> "The Secretary of each military department shall establish a program to improve the software acquisition processes of that military department.
>
> The head of each Defense Agency that manages a major defense acquisition program with a substantial software component shall establish a program to improve the software acquisition processes of that Defense Agency."

Clearly, there is both a need and an imperative to improve the government's ability to successfully acquire systems that have high software content.

1.2   The Acquisition Module

To help Department of Defense (DoD) program offices improve their abilities, the Office of the Secretary of Defense (OSD) announced the creation of the CMMI Acquisition Module (CMMI-AM), Version 1.0 in 2004 [Bernard 04]. The module, which draws practices from

the CMMI framework in addition to other relevant models,[2] was developed to aid program offices in developing a level of parity with their suppliers in terms of process maturity.

It is important to distinguish between CMMI models and modules. In general, CMMI *models* are the official documents defining best practices for a given discipline. Organizations can use models to achieve a maturity level rating. CMMI *modules* are excerpts from the model, often with additional material provided on a trial basis. Organizations can use modules to identify their strengths and weaknesses, but cannot base a maturity level rating on them [Gallagher 04]. The CMMI-AM is a *module*.

For the CMMI-AM, selected practices were extracted from CMMI-SE/SW/IPPD/SS Version 1.1 and other source models to support acquisition organizations as they plan projects, prepare and execute solicitations, monitor and control suppliers, and manage programs [SEI 02]. In general, the CMMI-AM uses the terminology of the source models, with acquisition-oriented amplification text added to help acquirers interpret the meaning of the process areas in the acquisition context. These practices provide a basis for discipline and rigor, allowing the acquisition process to be executed with repeated success [Bernard 04].

The CMMI-AM, Version 1.1, released in May 2005, represents an iterative refinement based on feedback from initial use of the module with 10 DoD program offices [Bernard 05]. Version 1.1 explains the acquirer's role versus the developer's role, clarifies terminology that was more oriented toward software development, and eliminates process areas (Integrated Teaming [IT], Configuration Management [CM], Process and Product Quality Assurance [PPQA], and Organizational Environment for Integration [OEI]) that are adequately addressed by generic practices. The update also restructures the document to make it more usable and includes an appendix that briefly discusses organizational process improvement.

Figure 2 illustrates how the CMMI-AM, Version 1.1 has evolved to meet the needs of acquirers.

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[2] The other relevant models include the Software Acquisition Capability Maturity Model (SA-CMM) framework [Cooper 02] and the Federal Aviation Administration (FAA) Integrated Capability Maturity Model (FAA-iCMM) [FAA 01].
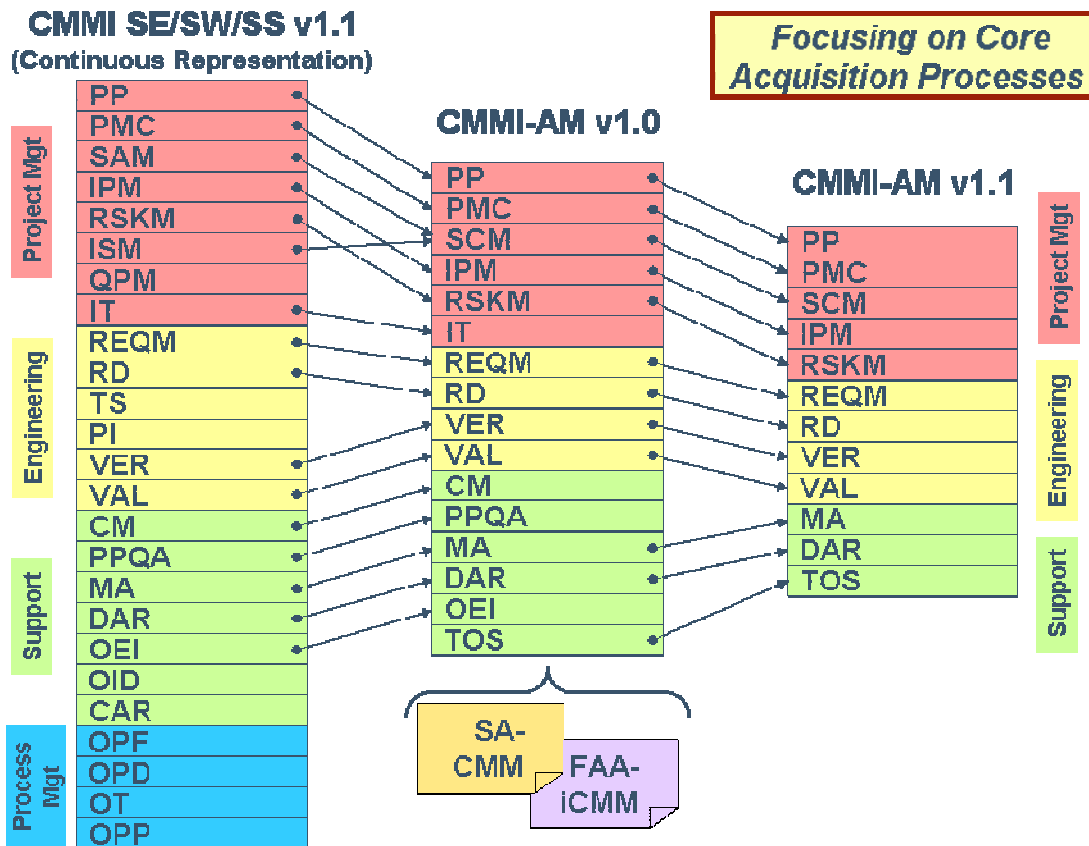
Figure 2: Evolution of the CMMI-AM, Version 1.1

1.3   Improvement Via the Acquisition Module

Introduction of the CMMI-AM raises a very important question: How can a program office best make use of it?

Process improvement using the CMMI framework as a guide entails a significant commitment of resources and time. For program offices where process improvement may not have been a priority in the past, undertaking a serious process improvement effort can be daunting. The structure of the CMMI has been developed to allow an organization to select areas for improvement based upon business needs. Rather than investing in process improvement aimed at a specific group of processes, subsections of the model can be selected to support improvement in those areas of the business that require immediate attention. The next step is to determine what those 'immediate attention' areas might be for an organization. For acquisition program offices, this is where the CMMI-AM is most useful. The CMMI-AM, in effect, establishes a "starter set" of process areas that are relevant to acquisition.

Defining a set of high-priority process areas is only the beginning, however. The next step is to determine where an organization stands with respect to those process areas. To accomplish this task, there are two main choices. One is to use the Standard CMMI Appraisal Method

for Process Improvement (SCAMPI^{SM}), which provides a standardized approach for determining process performance.[3] The other is to perform a self-assessment. For a program office with limited process improvement experience and resources, this may be a more suitable first step.

Certainly, acquisition organizations can elect to pursue a SCAMPI Class A appraisal to gain a first insight into their process maturity, but that is generally not a cost-effective solution for any organization that is initiating a formal process improvement effort. Self-assessment may be a better choice for these organizations because using a SCAMPI technique requires some understanding of process improvement and the CMMI framework. Additionally, the SCAMPI appraisal method requires the participation of staff that have been formally educated and authorized to support the execution of the method. In environments where the requisite level of understanding and training have not yet been reached, even the less rigorous SCAMPI B and C methods may be inappropriate as a first step (although SCAMPI B or C would be appropriate next steps after an organization has achieved some level of improvement following a self-assessment).

SM SCAMPI is a service mark of Carnegie Mellon University.
3   There are three classes of SCAMPI: "A," "B," and "C," with A being the most rigorous, and the only one that can result in a rating relative to CMMI maturity level.

2 Self-Assessment Based on the CMMI-AM

2.1   Description

In an organization where process maturity is a new concept, a self-assessment offers an easy entrée to the world of process improvement. As the term implies, self-assessment is a means by which an organization assesses compliance to a selected reference model or module without requiring a formal method. Self-assessment helps organizations find gaps between their current practices and the practices identified in the CMMI-AM. This early gap identification allows program offices to begin improving their business practices before exposing themselves to the external scrutiny of a SCAMPI evaluation. The results of the self-assessment can also be used to educate the organization about the acquisition module as well as about the requirements of the formal appraisal method.

The mechanics of a self-assessment are simple. Using a survey, acquisition office personnel respond to a series of questions based on their understanding of how work is performed in their organization. To encourage candor in the responses, program offices should administer the survey confidentially. The individual responses are then aggregated, averaged, and presented to the program office staff for discussion and further action.

Figure 3 helps illustrate these points. It shows examples of the types of statements to which an organization responds in a CMMI-AM self-assessment. A full assessment would have many more questions covering all the process areas described in the CMMI-AM, as outlined in Appendix B.

The statements are deliberately devoid of process model terminology; instead, they use language that should be more familiar and accessible to program office personnel. Respondents score each statement from 1 to 10, where 1 represents the statement on the left and 10 represents the statement on the right.

Within a program office, key personnel respond to the statements based on their own point of view. Key personnel includes, for example, the program manager and deputy program manager, the chief engineer, the chief software engineer, the contracts specialist, the business manager, and the leads of integrated product teams (IPTs). The goal is to get the widest response possible to avoid skewing results.

1. Estimates are based on wild guesses or dictated from above.

   Estimates of project planning parameters (i.e, scope, task attributes, lifecycle, cost, effort, etc.) are established and maintained.

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

2. Plans are rarely written down nor do they reflect current project activities.

   A project plan is established and maintained as the basis for managing the project.

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

3. We rarely seek commitments from those affected by the project plan.

   Commitments to the project plan are established and maintained.

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

4. We track progress based on personality and an arbitrary baseline.

   Actual performance and progress of the project are monitored against the project plan.

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

5. It is difficult to know when the project has deviated from the plan based on the data we review.

   Corrective actions are managed to closure when the project's performance or results deviate significantly from the plan.

   | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

Figure 3: Example CMMI-AM Self-Assessment Questions[4]

Figure 4 depicts a graphical example of how self-assessment results might be aggregated for further study and discussion within an organization. In this example, a fictitious organization assessed itself against the project management process areas described in the CMMI-AM. The horizontal axis shows the individual process areas, while the vertical axis shows the

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[4]   Excerpted from the SEI white paper "CMMI-AM: Goal Implementation Survey Version 1.1" by Brian P. Gallagher. The full list of questions appears in Appendix B of this document.

scores. The bars depict the range of scores for each process area. Mean scores are denoted
by the boxes.
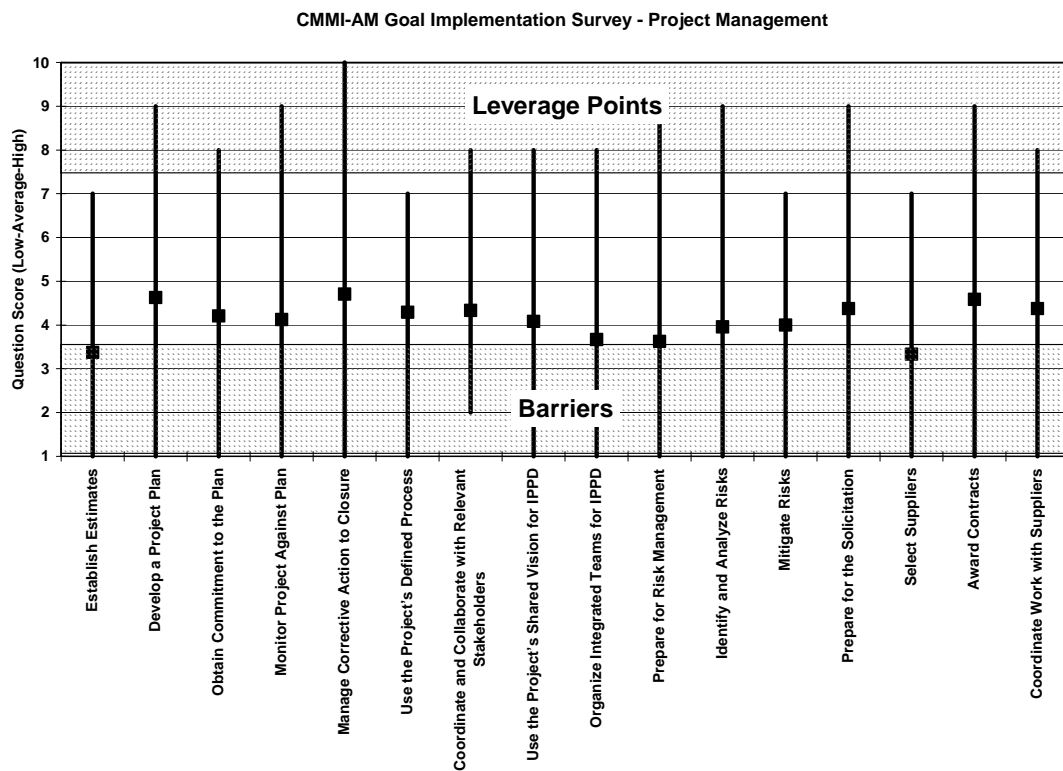
Figure 4:   Example CMMI-AM Self-Assessment Scoring Sheet[5]

In this example, the fictitious organization rated itself on the low side of average overall, as
determined by the mean scores (all less than 5). The organization rated two process areas,
Establish Estimates and Select Suppliers, low (mean scores just below 3.5). One process
area, Manage Corrective Action to Closure, received scores as low as 1 and as high as 10,
with a mean score of just under 5. All of the process areas indicate a wide range of
responses.

The fictitious acquisition office can now use the scoring sheet to open a dialogue about
process implementation in the organization. They can investigate the disparity of responses
among the staff and discuss what needs to be done to get a consistent set of responses (i.e.,
why is it that someone in this program office thinks that corrective actions are not managed
to closure and another person believes that the program office uses a rigorous method to
manage corrective actions to closure?). After the disparity in responses is addressed, the
program office can use the data from the self-assessment to discuss what needs to be done to
raise the average response (i.e., what does the program office need to do to establish and

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5   Excerpted from the companion tool to the white paper "CMMI-AM: Goal Implementation Survey
     Version 1.1" by Brian P. Gallagher.

maintain a more rigorous method to track corrective actions to closure?). When the average response for each process area is near 10 and the range of responses is smaller, the program office may be ready for a SCAMPI appraisal. Self-assessments tend to be optimistic, so following up with a SCAMPI appraisal after some initial improvements have been made is a good way to hone processes based on objective insights.

2.2   Benefits

Self-assessments do not impact the daily routine of a program office significantly; they do not require the organization to accommodate a site visit by an external assessment team. Typically, a SCAMPI A appraisal requires on-site interviews to confirm implementation and use of documented processes. This type of activity may require multiple visits over a period of weeks, depending upon the size and complexity of the program office. Self-assessments still require that program office staff take time to answer the questions, but this is generally substantially less effort than that required for any independent appraisal like a SCAMPI.

Self-assessments do not require documentation as evidence of compliance with a reference model, although having documentation can be invaluable for analysis of results, helping to answer questions like "How do we know?" The SCAMPI methods all require direct artifacts of implementation for each practice within the reference model or module. Self-assessments in fact, do not require any evidence at all. Generally, because of the lack of formality of the self-assessment, they tend to be less expensive to the program office.

The general characteristics of self-assessment in contrast to the three classes of SCAMPI appraisal are shown in Table 1. These characteristics are shown to provide a very high-level view of the impact of appraisals. One can easily see why self-assessment is an attractive alternative for beginning a process improvement effort. The increasing rigor of the SCAMPI methods offer better, and more objective, visibility into a program office's operation, providing the opportunity to fine-tune processes. The combination of techniques provides a means for program offices to bootstrap their improvement efforts progressively.

Table 1: Characteristics of Different Appraisal Methods[6]

Methods / Characteristics	Self-Assessment	SCAMPI		
		Class C	Class B	Class A
Amount of Objective Evidence (Required Documentation)	None	Low	Medium	High
Ratings Generated	No	No	No	Yes* (*but *not* for the CMMI-AM alone)
Resource Needs	Low	Low	Medium	High
Team Size	None	Small	Medium	High

2.3 Pitfalls

Although self-assessments can be a low-impact, low-cost way of gaining insight into an organization's process maturity, they are not without shortcomings.

For one thing, there is the tendency of people in an organization to rate themselves higher than an external, objective appraisal team. Such over-rating can happen for a variety of reasons. In an organization that is somewhat unfamiliar with process improvement or maturity models, there is plenty of room for interpretation of the questions. It is not surprising that people make their best guess when faced with questions about an unfamiliar subject. Sometimes people miss the point entirely, and instead of trying to provide an honest evaluation, they try to guess the "right" answer. Sometimes people provide the answer that they think the boss wants to hear. These are all very common (and human) responses when an organization embarks on a path to affecting change.

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6   This table has been adapted from the one found in *Appraisal Requirements for CMMI, Version 1.1 (ARC, V1.1)* [SEI 01].

The self-assessment process does not require documentation to "prove" that business practices have been implemented for the organization. In addition, no evidence that shows the execution of the documented practices is required to answer the questions on the self-assessment. If the organization lacks process documents, a self-assessment may not uncover the shortfall. This lack of documentation makes it difficult to later demonstrate repeatability of the business practices in a formal manner. More importantly, documented processes provide the basis for uniform understanding and execution of an organization's business.

External auditing organizations, such as the Government Accountability Office (GAO), generally do not regard self-assessment results as meaningful because of the informality and subjective nature of self-assessments. To achieve credibility, techniques such as the SCAMPI are still needed.

Finally, in some cases, it might be difficult to really know what the results mean. Do generally negative results indicate widespread process problems, a failure to communicate effectively within the organization about processes, or a simple misunderstanding of the self-assessment questionnaire? Likewise, do favorable results mean the organization is doing well, or do they indicate people are guessing at what they believe the desired answer to be? A self-assessment cannot answer these questions. Only a trained appraisal team can help answer such questions. This limitation does not invalidate self-assessment results; rather it supports the CMMI product suite approach of building upon the results of various gap analysis and triage techniques. The self-assessment tool can be used as an initial triage technique, but it must be considered with appropriate cynicism. More formal training, and the employment of appraisal techniques like the SCAMPI B or C, should follow the self-assessments.

3 Summary

This document provided background and high-level information about two starting points for process improvement in acquisition program offices. The CMMI-AM provides the "starter set" of best practices that acquisition offices can use to guide their improvement efforts. Self-assessments provide a relatively easy way to begin the training and awareness work that is critical to the success of an improvement effort, especially for program offices that are just getting started in process improvement.

It has been said that a 'journey of a thousand miles begins with the first step.' Self-assessments based on the CMMI-AM support process improvement initiatives in acquisition program offices and are a first step in the right direction.

Feedback

Through its Acquisition Support Program (ASP), the Carnegie Mellon® Software
Engineering Institute (SEI) is working to help improve the acquisition of software-intensive
systems across the U.S. government. As part of its mission, the SEI is pleased to discuss the
information in this report in more detail. The authors also welcome comments:

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The SEI has tools available to help program offices employ CMMI-AM based self-
assessments. For more information about tools for self-assessment, contact Stephen
Blanchette, Jr. at the email address above.

For more information about the CMMI-AM in general, contact ASP Director, Brian
Gallagher (bg@sei.cmu.edu).

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Appendix A   Acronyms and Abbreviations

The alphabetical list below contains all acronyms, abbreviations, and their meanings as used in this report.

ARC	Assessment Requirements for CMMI
ASP	Acquisition Support Program
CAR	Causal Analysis and Resolution
CM	Configuration Management
CMMI	Capability Maturity Model Integration
CMMI-AM	CMMI Acquisition Module
CMMI-SE/SW/IPPD/SS	CMMI for System Engineering/Software Engineering/Integrated Product and Process Development/Supplier Sourcing
CMU	Carnegie Mellon University
DAR	Decision Analysis and Resolution
DoD	Department of Defense
ESC	Electronic Systems Center
FAA	Federal Aviation Administration
GAO	Government Accountability Office
iCMM	Integrated Capability Maturity Model
IPM	Integrated Project Management
IPPD	Integrated Product and Process Development
IPT	Integrated Product Team
ISM	Integrated Supplier Management
IT	Integrated Teaming

MA	Measurement and Analysis
OEI	Organizational Environment for Integration
OID	Organizational Innovation and Deployment
OPD	Organizational Process Definition
OPF	Organizational Process Focus
OPP	Organizational Process Performance
OSD	Office of the Secretary of Defense
OT	Organizational Training
PI	Product Integration
PMC	Project Monitoring and Control
PP	Project Planning
PPQA	Process and Product Quality Assurance
QPM	Quantitative Project Management
RD	Requirements Development
REQM	Requirements Management
RSKM	Risk Management
SA-CMM	Software Acquisition Capability Maturity Model
SAM	Supplier Agreement Management
SCAMPI	Standard CMMI Appraisal Method for Process Improvement
SCM	Solicitation and Contract Monitoring
SEI	Software Engineering Institute
SR	Special Report
SW-CMM	Capability Maturity Model for Software
TN	Technical Note
TOS	Transition to Operations and Support

TR	Technical Report
TS	Technical Solution
VAL	Validation
VER	Verification

Appendix B   CMMI-AM Evaluation Statements

The following list is the full set of goal implementation survey questions[7] for the CMMI-AM, Version 1.1.

1.   Estimates are based on wild guesses or   Estimates of project planning
      dictated from above.   parameters (i.e., scope, task attributes,
                                                                 lifecycle, cost, effort) are established
                                                                 and maintained.

1	2	3	4	5	6	7	8	9	10

2.   Plans are rarely written down nor do   A project plan is established and
      they reflect current project activities.   maintained as the basis for managing
                                                                 the project.

1	2	3	4	5	6	7	8	9	10

3.   We rarely seek commitments from   Commitments to the project plan are
      those affected by the project plan.   established and maintained.

1	2	3	4	5	6	7	8	9	10

4.   We track progress based on personality   Actual performance and progress of the
      and an arbitrary baseline.   project are monitored against the
                                                                project plan.

1	2	3	4	5	6	7	8	9	10

---

[7]   Excerpted from the SEI white paper "CMMI-AM: Goal Implementation Survey Version 1.1" by
      Brian P. Gallagher.

5.   It is difficult to know when the project has deviated from the plan based on the data we review.

          Corrective actions are managed to closure when the project's performance or results deviate significantly from the plan.

1	2	3	4	5	6	7	8	9	10

6.   There are no organizational assets available to assist in conducting the project.

          The project is conducted using a defined process that is tailored from the organization's set of standard processes.

1	2	3	4	5	6	7	8	9	10

7.   Relevant stakeholders for our project are avoided or unknown.

          Coordination and collaboration of the project with relevant stakeholders are conducted.

1	2	3	4	5	6	7	8	9	10

8.   Project team members do not share a common vision of success.

          The project is conducted using the project's shared vision.

1	2	3	4	5	6	7	8	9	10

9.   Our integrated teams are ad hoc and ill-defined.

          The integrated teams needed to execute the project are identified, defined, structured, and tasked.

1	2	3	4	5	6	7	8	9	10

10. Our program lacks a coherent risk management strategy, roles are ill-defined, and my responsibilities for participation in the process is not clear.

Preparation for risk management is conducted.

1	2	3	4	5	6	7	8	9	10

11. We deal with problems and issues, there's no time to think proactively.

Risks are identified and analyzed to determine their relative importance.

1	2	3	4	5	6	7	8	9	10

12. Risk mitigation is ad hoc, and only dealt with in crisis mode.

Risks are handled and mitigated, where appropriate, to reduce adverse impacts on achieving objectives.

1	2	3	4	5	6	7	8	9	10

13. Our project scrambles to prepare for solicitation activities and has to "make it up" on the fly.

The project is prepared to conduct the solicitation.

1	2	3	4	5	6	7	8	9	10

14. Our suppliers are selected based on political whims.

Suppliers are selected based on the solicitation package.

1	2	3	4	5	6	7	8	9	10

15. Our contracts do not provide for the tasks, deliverables, and insight to meet our needs.

Contracts are issued based on the needs of the acquisition and the suppliers' proposed approaches.

1	2	3	4	5	6	7	8	9	10

16. We get little or no insight into the processes used by our suppliers or their interim work products.

Work is coordinated with suppliers to ensure the contract is executed properly.

1	2	3	4	5	6	7	8	9	10

17. Our project team has a hard time knowing what the requirements baseline really is.

Requirements are managed and inconsistencies with project plans and work products are identified.

1	2	3	4	5	6	7	8	9	10

18. Our set of requirements for this project do not reflect the needs or expectations of the project's stakeholders.

Stakeholder needs, expectations, constraints, and interfaces are collected and translated into customer requirements.

1	2	3	4	5	6	7	8	9	10

19. Our requirements are at such a high level, you could drive a truck through them.

Customer requirements are refined and elaborated to develop product and product component requirements.

1	2	3	4	5	6	7	8	9	10

20. It's hard to tell if our requirements will result in a useful system.

The requirements are analyzed and validated, and a definition of required functionality is developed.

1	2	3	4	5	6	7	8	9	10

21. Our verification activities are undefined.

Preparation for verification is conducted.

1	2	3	4	5	6	7	8	9	10

22.   We never review our own work before   Peer reviews are performed on selected
sending it out.   work products.

1	2	3	4	5	6	7	8	9	10

23.   We rarely verify work products against   Selected work products are verified
their specified requirements.   against their specified requirements.

1	2	3	4	5	6	7	8	9	10

24.   Our validation activities are undefined.   Preparation for validation is conducted.

1	2	3	4	5	6	7	8	9	10

25.   We never know if a product will be   The product or product components are
usable in its intended environment until   validated to ensure that they are
it actually gets there.   suitable for use in their intended
operating environment.

1	2	3	4	5	6	7	8	9	10

26.   We collect all kinds of data for no   Measurement objectives and activities
apparent reason.   are aligned with identified information
needs and objectives.

1	2	3	4	5	6	7	8	9	10

27.   I don't get the data I need, and when I   Measurement results that address
do get data, I don't believe it.   identified information needs and
objectives are provided.

1	2	3	4	5	6	7	8	9	10

28.   The boss makes all the decisions.   Decisions are based on an evaluation of
alternatives using established criteria.

1	2	3	4	5	6	7	8	9	10

29.   We ignore operational issues and   Preparation for transition to operations
        logistics—it just slows us down to   and support is conducted.
        listen to those guys.

1	2	3	4	5	6	7	8	9	10

30.   We don't have time to think about   Transition decisions and actions are
        transition criteria, we need to get our   executed in accordance with transition
        products to the field.   criteria.

1	2	3	4	5	6	7	8	9	10

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13. ABSTRACT (MAXIMUM 200 WORDS)

Use of capability maturity models has become commonplace among software development organizations, especially defense contractors. Government program offices, however, have lagged behind contractors in implementing their own process improvement programs. The difference in relative maturity between program offices and contractors sometimes makes it difficult for program offices to gauge the state of their programs. In 2004, the Office of the Secretary of Defense announced the creation of the CMMI® Acquisition Module (CMMI-AM), Version 1.0. The module aids program offices in developing a level of parity with their suppliers in terms of process maturity. Version 1.1, released in 2005, is an incremental refinement.

The first step in any process improvement endeavor is to determine the baseline state. A program office can undergo an external appraisal, but that is not a cost-effective solution for an organization that is still a novice in process improvement. For organizations with little process improvement experience, a better choice is to begin with a self-assessment.

This guide provides program managers with general information about the CMMI-AM, details about the self-assessment technique, and the questions used in a self-assessment. After reading this guide, program managers can evaluate whether a self-assessment fits their needs, and if so, conduct one.

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